Advanced Oxidation Process (AOP) Water Treatment Facility Fact Sheet

Tucson Water is committed to Water Reliability –

providing a reliable supply of quality water to its customers today and in the future. Making wise and well planned investments in infrastructure is critical to achieving this goal.

- The Advanced Oxidation Process – AOP – Water Treatment Facility represents a strategic investment in our desert community's water reliability.
- The new AOP water treatment facility is located at 1102 W. Irvington Road, adjacent to Tucson Water's existing Tucson Airport Remediation Project (TARP) facilities.
- Construction starts in July 2012, with the AOP operational in fall 2013.
- The AOP water treatment facilities will include
  - a 4500 square-foot facility that will house 3 side-by-side ultraviolet (UV) reactors, telecommunications center, electrical room, storage and battery supplies
  - 8 granular activated carbon (GAC) contactors , each approximately 18 feet high
  - GAC backwash tanks
- Malcolm Pirnie, the water division of ARCADIS, is the AOP planning and design firm.
- PCL Construction, Inc. will build the AOP facility.
- The AOP treatment facility will cost approximately $15 million to construct. Construction costs are included in Tucson Water's long range capital plan.
- AOP is a cost effective and proven technology that combines UV light with hydrogen peroxide to create a strong oxidant that effectively removes 1,4-dioxane and other constituents from water.
- 1,4-Dioxane was used as a stabilizer in industrial solvents in aircraft manufacturing facilities from the 1940s to the 1970s and has been found in groundwater at the TARP-area.
- The AOP treatment facility is a pro-active approach on behalf of the City of Tucson and Tucson Water to respond to the Environmental Protection Agency's (EPA) health advisory levels for 1,4-dioxane. The EPA does not currently regulate 1,4-dioxane but issues advisories as guidelines for the nation's water utilities. In January, 2011, the EPA issued a new drinking water health advisory for 1,4-dioxane of 0.35 parts per billion – significantly lower than the most recent advisory level of 3 parts per billion.
- Using the new AOP treatment facility and the existing TARP treatment plant, Tucson Water will purify 8 million gallons of water daily.
- Tucson Water meets all federal drinking water standards and is safe for drinking, cooking, and bathing. The utility collects about 12,000 water samples each year across its service area with test results reported to the Arizona Department of Environmental Quality and to citizens in an annual Consumer Confidence Report.